

WHAT IS CLAIMED:

1. A laminable photochromic element comprising a photochromic layer comprising a polyester urethane binder and a photochromic compound, the photochromic layer adhered to one surface of a polymeric layer comprising a polycarbonate resin or a polysulfone resin.
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2. The laminable photochromic element of claim 1 wherein the photochromic layer is sandwiched between two polymeric layers, each of the polymeric layers comprising a polymer selected from the group consisting of polycarbonate resin and polysulfone resins.
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3. The laminable photochromic element of claim 2 consisting of three layers comprising the photochromic layer and the two sandwiching layers comprising a polymer selected from the group consisting of polycarbonate resin and polysulfone resins.
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4. The laminable photochromic element of claim 2 fused to a polymeric surface.
5. The laminable photochromic element of claim 2 adhesively secured to a polymeric surface.
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6. The laminable photochromic element of claim 4 wherein the polymeric surface comprises an ophthalmic lens.
7. The laminable photochromic element of claim 5 wherein the polymeric surface comprises an ophthalmic lens.
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8. The laminable photochromic element of claim 1 wherein the polymeric layer comprises a polycarbonate resin or a polysulfone resin with a first surface and a second surface, the polyester urethane is contiguous to the first surface of the
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polymeric layer and to a functional layer selected from the group consisting of scratch resistant layers, anti-fogging layers, tint layers, and hydrophobic layers.

5 9. The laminable photochromic element of claim 2 wherein the polymeric layer comprises a polycarbonate resin or a polysulfone resin with a first surface and a second surface, the polyester urethane is contiguous to the first surface of the polymeric layer and to a functional layer selected from the group consisting of scratch resistant layers, anti-fogging layers, tint layers, and hydrophobic layers.

10 10. The laminable photochromic element of claim 7 wherein the polymeric layer comprising a polycarbonate resin or a polysulfone resin with a first surface and a second surface, the polyester urethane contiguous to the first surface of the polymeric layer and a functional layer selected from the group consisting of scratch resistant layers, anti-fogging layers, tint layers, and hydrophobic layers.

15 11. A method of forming a photochromic element according to claim 1 comprising forming a mixture by mixing the photochromic compound with the polyester urethane, forming a dry film of the mixture, then securing the dry film to the polymeric layer.

20 12. A method of forming a photochromic element according to claim 2 comprising forming a mixture by mixing the photochromic compound with the polyester urethane, forming a dry film of the mixture, then sandwiching the dry film between the two polymeric layers.

25 13. A method of forming a multi-layer polymeric photochromic article comprising securing the laminable article of claim 1 to a polymeric article.

30 14. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 2 to a polymeric article.

15. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 3 to a polymeric article.

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16. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 4 to a polymeric article.

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17. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 5 to a polymeric article.

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18. A method of forming a multi-layer polymeric photochromic lens comprising laminating a polymeric layer of the laminable article of claim 6 to a polymeric article.

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19. A method of forming a multi-layer polymeric photochromic lens comprising laminating a polymeric layer of the laminable article of claim 7 to a polymeric article.

20. A method of manufacturing an ophthalmic lens with photochromic properties comprising:

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providing a photochromic element comprising at least two layers of polymeric material comprising a) a first polymeric layer containing at least 0.05% by weight of photochromic material and b) at least one second polymeric layer comprising a polycarbonate or polysulfone resin;

placing said photochromic element within a shaping environment;

providing a hardenable composition adjacent to said photochromic

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element while the photochromic element is within the shaping environment,

and shaping the hardenable polymeric composition within said shaping environment; and

hardening said hardenable polymeric composition within said shaping environment to form the ophthalmic lens.

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21. The method of claim 20 wherein said shaping environment is a mold.

22. The method of claim 21 wherein said mold is an injection molding mold.

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23. The method of claim 22 wherein said photochromic element comprises at least three polymeric layers comprising a) a first polymeric layer comprising a polyester urethane containing at least 0.05% by weight of photochromic material and b) at least a second polymeric layers and a third polymeric layer, with the second and third polymeric layers sandwiching the photochromic layer, each of the second and third polymeric layers comprising polycarbonate resin or polysulfone resin.

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24. The method of claim 21 wherein said photochromic element is pre-shaped to a form that corresponds to a geometry similar to that of the shaping environment and the geometry is other than flat.

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25. The method of claim 22 wherein said photochromic element is pre-shaped to a form that corresponds to a geometry similar to that of the shaping environment and the geometry is other than flat.

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26. The method of claim 23 wherein said photochromic element is pre-shaped to a form that corresponds to a geometry similar to that of the shaping environment and the geometry is other than flat.

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27. The method of claim 20 wherein said second polymeric composition comprises a polycarbonate resin.

28. The method of claim 20 wherein said hardenable composition comprises a polysulfone composition.

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